

# E-car charging stations and Chainsaws in the EU:

## ARE THEY COMPLIANT WITH THE EU LEGISLATION?

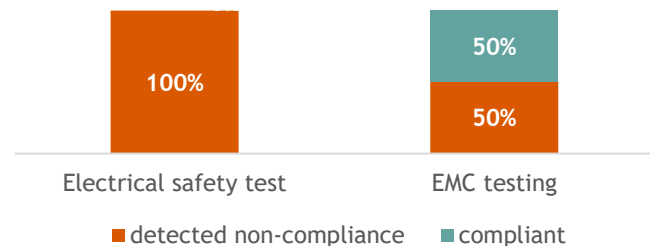
The Joint Action JAHARP2022-03 surveyed the Single Market to verify compliance of e-cars charging stations with the EU Radio Equipment (RED), the Low Voltage (LVD) and the Electromagnetic Compatibility (EMC) Directives, and of battery powered and corded-electric chainsaws with the Machinery and Low Voltage Directives. The project, coordinated by [PROSAFE](#), started in April 2023 and will end in March 2025.

### E-CARS CHARGING STATIONS/CABLES



16 products were tested and all of them failed the test programme.

100% of the products failed electrical safety testing, and 50% failed the EMC testing.



#### Legislation:

Radio Equipment Directive (RED)  
2014/53/EU

Electromagnetic Compatibility Directive  
(EMCD) 2014/30/EU

Low Voltage Directive (LVD) 2014/35/EU

#### First time:

The market for electric vehicles is growing, leading to a greater demand for public and residential e-car charging stations. It was then necessary to **target e-car chargers for the first time**.

The main issues with regards to safety requirements were:

- Loss of electrical continuity;
- Relay contact separation and creepage and clearance distances below allowable limits;
- Insufficient electrical insulation,
- User instructions not containing the necessary safety information.

For EMC requirements, **excessive radiated and conducted emissions** were the main area of non-compliance.

Several *EU declarations of Conformity* were also not in line with the requirements in the RED Directive 2014/53/EU.

**Caution!** The above results are based on products that were sampled from the markets in the participating countries by experienced market surveillance inspectors that were looking for non-compliant products. As in any routine market surveillance activity, the results represent the targeted efforts that authorities undertake to identify non-compliant products. They do not give a statistically valid picture of the market situation.

## CHAINSAWS

**13 different models** were sampled and tested. Electrical and mechanical tests were conducted to evaluate the compliance rate of these products.

### Electrical tests:

10 samples underwent all applicable electric tests.

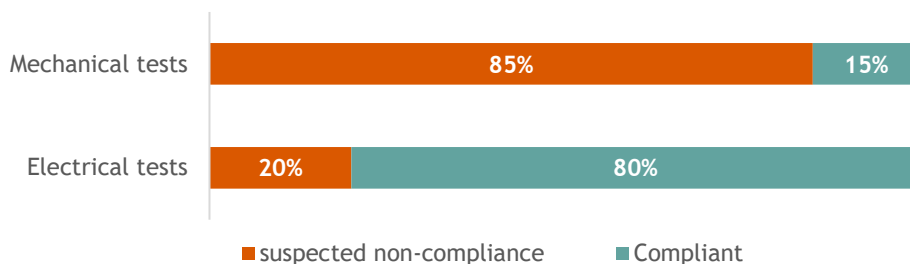
There were **no non-conformities found on the chainsaws, but some non-conformities were found on the chargers of two models.**

### Mechanical tests:

All 13 models have been tested against Machinery Directive requirements and only **2 models passed all the mechanical tests.** The kickback test was carried out only for the models with higher chain speeds.

The main issues identified so far during mechanical tests are:

- **Handles and hand guards not able to resist strength tests:** 3 front handles failed, 8 mounting pads broke before the handle could be fully loaded according to the requirement, 2 hand guards failed;
- **The Dimensions of handles and handguards were not always according to the requirements** of the standard: 3 out of 13 failed in new condition, and after the strength test, they were in most cases severely damaged and could not be further tested;
- **Insufficient chain brake performance:** 4 chain brakes performed below the required level;
- **Insufficient chain catcher strength:** 1 chain catcher failed.



The participating market surveillance authorities checked the markings and documentation of the 13 models.

**Administrative non-conformities were found for all models**, with all models presenting non-conformities regarding the user instructions, and some of them concerning the traceability requirements.

The electrical and mechanical shortcomings were demonstrated by and discussed with the 2 selected test laboratories.



### Legislation:

*Machinery Directive 2006/42/EC*

*Low Voltage Directive 2014/35/EU*



### Dissemination:

**A stakeholders meeting** was held on 29 January 2025 to present the progress and provisional results to relevant trade and consumers organisations and the European Commission.

**JAHARP2022**

**5 PROJECTS**

**25 MSAS**

**16 COUNTRIES**

## MAIN CHALLENGES

Most of the e-cars charging stations and cables were sampled from online retailers, which implied that the manufacturers did not provide the component specifications and approval data that is needed for type-testing. The absence of this documentation represented a challenge for the laboratory and for the MSAs when evaluating the test results.

The chainsaws project group encountered difficulties in finding suitable laboratories due to lack of kick back testing capacity and very expensive testing.

In addition, a rigorous and undisputable test programme requires a new out-of-the-box sample for many test parameters hence the authorities considered sampling a larger number of specimens for each product model.

Furthermore, kickback testing was considered not relevant for chainsaws with a low chain speed. Once this became clear, the test programme was revisited, and new parameters were included with some additional testing ongoing at the moment.

## RISK ASSESSMENT

After having evaluated the results of the tests and of the documentation checks, the participants assessed the risk posed by the non-conformities observed and discussed the enforcement measures to be taken.

Concerning e-cars charging stations and cables, most of the safety nonconformities have been evaluated as having a medium risk, with a few deemed to pose a serious risk. On the other hand, EMC nonconformities are currently being discussed with EMC specialists.

Three of the products have already been voluntarily withdrawn from the market by the responsible economic operator.

Concerning chainsaws, the group agreed on a common risk assessment methodology, which consists in defining first the user and the circumstances (e.g. unexperienced consumer, either pruning or sawing firewood, often in unstable position like on the top of a ladder), and then the probability of accidents and the level of severity of possible injuries.

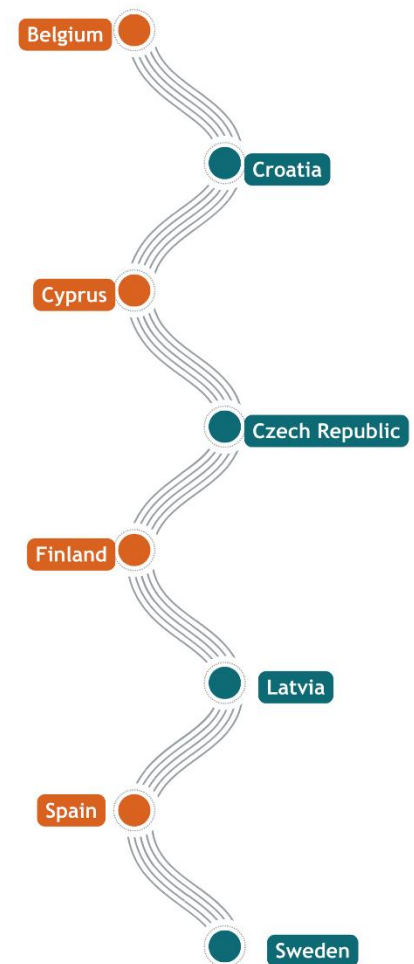
The MSAs are finalising their risk assessment and will then evaluate the necessary follow-up and enforcement measures to be taken in relation to the observed non-conformities.

## FINAL CONFERENCES

Two Final Conferences dedicated to the work accomplished in the two product groups will be held on 28 March 2025 (E-cars) and 19 March 2025 (Chainsaws).

The 9 participating Market Surveillance Authorities from 8 EU Countries will present the key results and lessons learnt to the European Commission and interested stakeholders. If you would like to join, please contact PROSAFE at [info@prosafe.org](mailto:info@prosafe.org).

## JAHARP2022-03 Member States



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